# One, Two, Oligo – Azobenzenes in a Row

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Controlling the spatial arrangement of chemical structures on a molecular level in a reversible manner is still one of the ‚holy grails' in chemistry. A tool to achieve this task would enable the switching of a certain function enabled by a specific conformation. The azobenzene moiety has been shown to fulfill this requirement as it changes geometry from the more stable *E*- to the *Z*-isomer upon irradiation. Although this switch has been studied extensively, the influence of conjugation of multiple azobenzenes has only scarcely been studied. Our investigations of this effect for linear oligo-*ortho*–azobenzenes will be presented.

Furthermore, the arrangement of azobenzene units in a macrocyclic fashion adds a new dimensionality to this powerful tool. In the past years we developed an efficient entry to triscycloazobenzenes as well as triscycloazobiphenyls. Choosing the right conditions each isomer of the multiphotochromic compounds can be accessed. Based on this knowledge these molecules are evaluated for applications such as liquid crystals, molecular grippers or optical storage devices.